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EXAMINER

KE, PENG

ART UNIT PAPER NUMBER

2174

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,781

Applicant(s)

RAJARAJAN ET AL.

Examiner

Peng Ke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1-3, 6-10, 13-25, 27, 29 are rejected under 35 U.S.C. 102(a) as being anticipated by Lyle et al. (US 5,956,023)

As per claim 1, Lyle et al. teaches in a computing device, a system comprising:

a modeling engine, the modeling engine connected to a user interface (col. 4, lines 54-64); The examiner infers to the application control manager to be a type of modeling engine.

a layout engine, the layout engine connected to the modeling engine and configured to execute an automatic layout process that automatically lays out modeling elements (col. 10, lines 3-14); The examiner infers to transmitting a prescribed function code for implementation by the application control manager to be automatically laying out modeling elements

and a set of at least one interface connecting the modeling engine to the layout engine, the set including at least one interface through which the modeling engine communicates with the layout engine to provide user interaction with the automatic layout process other than to cancel the automatic layout process (col. 10, lines 30-40). The examiner infers to pause/end to be an user interaction with the automatic layout process other than to cancel the automatic layout process.

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As per claim 2, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine by calls from the layout engine via the interface (col. 12, lines 45-60).

As per claim 3, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine via events raised by the layout engine (col. 10, lines 41-51).

As per claim 4, Lyle et al. teaches the system of claim 1, Lyle teach wherein the modeling engine communicates with the layout engine to provide a progress indicator to the user. (Fig. 11, item 78)

As per claim 5, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine to obtain status information from the layout engine (col. 12, lines 61-68).

AS per claim 6, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine to interrupt the automatic layout process (col. 10, lines 41-51).

As per claim 7, Lyle et al. teaches the system of claim 6 wherein the modeling engine communicates with the layout engine to preserve state of the automatic layout process (col. 10, lines 41-51).

As per claim 8, Lyle et al. teaches the system of claim 7 wherein the modeling engine communicates with the layout engine to preserve the state of the automatic layout process by passing an interface thereto (col. 10, lines 41-51, fig 4, item 86).

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As per claim 9, Lyle et al. teaches the system of claim 7 wherein the modeling engine communicates with the layout engine to restore the state of the automatic layout process, and to resume the automatic layout process (col. 10, lines 41-51).

As per claim 10, Lyle et al. teaches the system of claim 9 wherein the modeling engine communicates with the layout engine to restore the state of the automatic layout process by passing an interface thereto (col. 10, lines 41-51). It is inherent that the display will include a resume button.

As per claim 13, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine to obtain capability information from the layout engine (fig. 9, item 102)

As per claim 14, Lyle et al. teaches a computer-implemented method, comprising:
starting a layout engine to lay out model elements(Fig 5, item 98);
receiving information from the layout engine indicating that it can be safely interrupted;
and interrupting the layout engine based on the information (Fig 9. item 86).

As per claim 15, Lyle et al. teaches the method of claim 14 wherein receiving information comprises receiving an event (Fig 9. item 86); It is inherent that the pause/end would be available only when the user have the permission to pause the process.

As per claim 16, Lyle et al. teaches the method of claim 14 further comprising, receiving a request to interrupt the layout engine, and waiting for the information from the layout engine indicating that it can be safely interrupted (Fig 5, item 98, Fig 9, item 86); It is inherent that the pause/end would be available only when it is save to interrupt.

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As per claim 17, Lyle et al. teaches the method of claim 14 wherein the request comprises a user action (Fig 9. item 86).

As per claim 18, Lyle et al. teaches a computer computer-readable medium having computer executable instructions for performing the method of claim 14 (col. 19, lines 62-64).

As per claim 19, Lyle et al. teaches a computer-implemented method, comprising:
starting a layout engine to lay out model elements (col. 10, lines 3-14). The examiner infers to transmitting a prescribed function code for implementation by the application control manager to be automatically lays out modeling elements;

providing information to the layout engine by which the layout engine preserves state information (col. 4, lines 54-64);

interrupting the layout engine (col. 10, lines 3-14);

providing information to the layout engine by which the layout engine restores state from the state information (col. 10, lines 3-14); It is inherent that when the user resume the process, the layout engine provides the user with the state information by switching the resume button back to the pause/end button; and

restarting the layout engine from the restored state (col. 10, lines 3-14).

As per claim 20, Lyle et al. teaches the method of claim 19 wherein starting the layout engine includes communicating information to the layout engine through an interface thereof (col. 10, lines 4-14).

As per claim 21, Lyle et al. teaches the method of claim 19 wherein providing information to the layout engine by which the layout engine preserves state information includes

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passing an interface to the layout engine (col. 10, lines 41-51). It is inherent that the resume button indicates to the user that the system is in a preserved state, which can be resumed.

As per claim 22, Lyle et al. teaches the method of claim 19 wherein interrupting the layout engine includes communicating information to the layout engine through an interface thereof (col. 10, lines 41-51, fig 4, item 86).

As per claim 23, which is dependent on claim 22, it is of the same scope as claim 15. (see rejection above).

As per claim 24, Lyle et al. teaches the method of claim 19 wherein providing information to the layout engine by which the layout engine restores state information includes passing an interface to the layout engine (col. 10, lines 41-51). It is inherent that when the process is resumed, the button is returned to the pause/end state, which indicate to the user that the process is being executed.

As per claim 25, Lyle et al. teaches the method of claim 19 further comprising, receiving events from the layout engine (col. 10, lines 14-18).

As per claim 26, which is dependent on claim 25, it is of the same scope as claim 4 (see rejection above).

As per claim 27, Lyle et al. teaches the method of claim 19 further comprising, calling the layout engine to receive status information therefrom (col. 12, lines 61-68).

As per claim 29, Lyle et al. teaches a computer computer-readable medium having computer executable instructions for performing the method of claim 19 (col. 9, lines 24-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyle (US 5,956,023) in view of Hurtado et al. (US 6,418,421).

As per claim 28, Lyle et al. teaches the method of claim 19. However, he fails to teach wherein the status information includes data corresponding to time remaining to complete laying out the model elements. Hurtado et al. teach a method wherein the status information includes data corresponding to time remaining to complete laying out the model elements (col. 56, lines 20-35.). It would have been obvious to an artisan at the time of the invention to include Hurtado's teaching with Lyle et al.'s engine in order to allow the users to utilize their time more efficiently.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyle (US 5,956,023) in view of Wittenburg et al. (US 6,515,656).

As per claim 11, Lyle et al. teaches the system of claim 1. However, Lyle et al. fail to teach the system wherein the layout engine comprises a pluggable software component. Wittenburg teaches usage and implementation of pluggable software (col. 7, lines 14-34). It would have been obvious to an artisan at the time of the invention to include Wittenburg's

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teaching with Lyle et al.'s engine in order to allow user to add components that are independent of other components.

As per claim 12, Lyle et al. and Wittenburg teach the system of claim 1. Wittenburg further teaches wherein the modeling engine comprises a pluggable software component (col. 7, lines 14-34).

Conclusion

The following patent is cited to further show the state of the art with respect to a method for a modeling system:

Harel: (US 6,384,843): discloses an apparatus and method for analyzing software systems.

Morganelli et al. (US 6425,120): discloses a repeating program object for use with a graphical program development system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peng Ke whose telephone number is (703) 305-7615. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KRISTINE L KINCAID can be reached on (703) 308-0640. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Peng Ke

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